

REMARKS

Claims 116-118, 120-160, 162-166 and 184-195 are now pending in the above-referenced patent application. Applicants respectfully request further consideration of these claims, in view of the amendments set forth above and the following remarks.

Canceled Claim

Claim 119 has been canceled.

Amended Claims

Claim 116 has been amended to claim a preferred embodiment of Applicants invention having substantial commercial significance, and for which an early Notice of Allowance is desired. Support for this amendment can be found in the specification, and in as-filed claim 119 (now cancelled).

Claim 120 has been amended, without change in the substantive scope thereof, to be consistent with the amendment to claim 116 from which it depends, to clarify certain features of the claim as discussed below, and to correct a typographical error. Claims 121 and 122 have been amended, consistent with the amendment to claim 120, to correct a typographical error. Support for the amendment to claim 120 can be found throughout the specification, including for example in Figures 4 and 5 and the associated text at page 38, line 15 through page 39, line 29, and also in Figure 8 and the associated text generally at page 51, line 33 through page 53, line 16, and particularly at page 52, line 21 through page 53, line 3.

Claims 123, 130, 131, 135, 139 and 145 have each been amended, without change in the substantive scope thereof, to clarify that the materials being loaded to the microreactors are the candidate catalysts being evaluated. Claim 123 has also been amended, without change in the scope thereof, to provide antecedent basis for "material-containing microreactor". Support for these amendments can be found in the as-filed claims and throughout the specification, including for example at page 29, line 42 through page 40, line 26.

Claims 145-149, 151-154 and 159-160 have each been amended to claim a preferred embodiment. The as-amended claims require at least twenty five materials in twenty five or more microreactors. Support for this amendment can be found in the as-filed claims and in the

specification, including for example at page 36, lines 14-30, and at page 49, line 27 through page 51, line 1.

Claim 145 and 146 have also each been amended to claim a preferred embodiment of Applicants invention having substantial commercial significance. The as-amended claim requires loading of the candidate materials into their respective microreactors using an automated (e.g., robotic) material handling system. Claim 149 has been amended to be consistent with the amendment to claims 145 and 146. Support for these amendments can be found in as-filed claim 149, and throughout the specification, including for example in Fig. 1C, at page 22, lines 2-13, at page 30, lines 4-7, at page 33, lines 12-14 and at page 38, lines 8-14.

claim 49  
unloading  
by automated  
material  
handling  
system

Claims 162, 165 and 166 have been amended, without changing the substantive scope thereof, for clarification. Support can be found in the as-filed claims and in the specification, including for example at page 90, line 15 through page 91, line 22.

No new matter has been added.

#### New Claims

New claims 186-195 have been added to claim certain preferred embodiments of the invention. Support for these claims can be found throughout the specification, including for example: at page 59, lines 2-22 (temperature); at page 60, line 31 through page 61, line 4 (temperature); at page 40, line 29 through page 41, line 9 (gaseous reactants); and in as-filed claim 149, in Fig. 1C, at page 22, lines 2-13, at page 30, lines 4-7, at page 33, lines 12-14 and at page 38, lines 8-14 (automated material handling system).

No new matter has been added.

#### Rejection Under 35 U.S.C. § 112 (Indefiniteness)

The Office action has rejected claims 116-160, 162-166, 184 and 185 as being indefinite under 35 U.S.C. § 112, second paragraph. In particular, specific concerns are set forth as to each of the following claims or claim sets: claims 116, 123, 130, 131, 139 and 140; claims 117, 126 and 135; claims 118 and 127; claim 119; claim 120; claims 119-122; claim 123; claim 128; claim 140; claim 145; claims 152-154; claim 162 and claims 151-154, 162, 165 and 166. (See paragraphs 4-17 at pages 2-5 of the Office action).

Applicants respectfully traverse these rejections, in view of the following remarks.

*MPEP § 2173.02*

Office policy regarding rejections under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph was recently clarified in advance of notice to changes to MPEP §2173.02 (*See* Memorandum from Stephen G. Kunin to Technology Center Directors dated January 17, 2003). This memorandum underscores the importance, in view of recent developments in case law, of a critical analysis as to whether a rejection under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph is warranted. In particular, it is noted that

during examination of claims for compliance with the requirement for definiteness... some latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the Examiner might desire. ... (T)he Examiner must consider the claim as a whole to determine whether the claim apprises one of skill in the art of its scope, and therefore, serves the notice function required (under the statute).

*See* the 2<sup>nd</sup> paragraph of the Memorandum from Stephen G. Kunin to Technology Center Directors dated January 17, 2003 (emphasis added). Also, it is expressly stated that if the Examiner determines that a rejection is proper after having given such careful analysis, that

an analysis as to why the phrases(s) used in the claims is “vague and indefinite” should be included in the Office action.

*See* the 5<sup>th</sup> paragraph of the Memorandum from Stephen G. Kunin to Technology Center Directors dated January 17, 2003 (emphasis added).

Applicants respectfully submit that in view of the Office policy outlined above, many of the rejections made under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, in this Office action appear to completely unfounded based upon a plain reading of the claim language, and in particular based upon a reading of the claim language in the context of the specification. Also, for some of the rejections, the Office action does not set forth *any* analysis or *explanation* as to why the Examiner considers the claim language to be indefinite.

Applicants have, nonetheless, provided a detailed response to each of the issues raised by the Office with respect to this statutory requirement.

*Claims 116, 123, 130, 131, 139 and 140*

As to claims 116, 123, 130, 131, 139 and 140, it is asked whether the at least four materials are in each of the microreactors, or whether there is one material per microreactor

giving a total of four materials for four microreactors. (See paragraph 5 at page 2 of the Office action).

The plain language of these claims leads to a definite understanding of what Applicants regard as their invention. Each of claims 116, 123, 130, 131, 139 and 140 expressly requires at least four materials that are *individually* resident in *separate* microreactors. Therefore, a person of ordinary skill would readily understand that each of the four microreactors are required to have a material residing therein. They could have more than one material in each of the four or more reactors, but each of four reactors has to have at least one material residing therein.

Such plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. See, for example, the specification at page 29, lines 43-46.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the inventions and would understand whether or not they infringe these claims. As such, these claims are not indefinite under 35 U.S.C. § 112, second paragraph. See United Carbon Co. v. Binney Co., 317 U.S. 328, 87 L. Ed. 32, 63 S. Ct. 165 (1942); see also Hybritech Inc. v. Monoclonal Antibodies, Inc., 231 USPQ 81 (Fed. Cir. 1986).

#### *Claims 117, 126 and 135*

With regard to claims 117, 226 and 135, the Office action asks whether the at least ten materials are in each of the microreactors, or whether there is one material per microreactor giving a total of ten materials for ten microreactors. (See paragraph 6 at page 2 of the Office action).

Each of claims 117, 126 and 135 depends from a corresponding independent claim that requires the materials to be *individually* resident in separate microreactors. Therefore, a person of ordinary skill would readily understand that each of the at least ten microreactors are required to have a material residing therein. They could have more than one material in each of the at least ten reactors, but each of ten reactors has to have at least one material residing therein.

Such plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. See, for example, the specification at page 29, lines 43-46.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the inventions

and would understand whether or not they infringe these claims. As such, these claims are not indefinite under 35 U.S.C. § 112, second paragraph.

*Claims 118 and 127*

Similarly, with regard to claims 118 and 127, it is asked whether the at least one hundred materials are in each of the microreactors, or whether there is one material per microreactor giving a total of one hundred materials for one hundred microreactors. (See paragraph 7 at page 3 of the Office action).

Each of claims 118 and 127 depends from a corresponding independent claim that requires the materials to be *individually* resident in separate microreactors. Therefore, a person of ordinary skill would readily understand that each of the at least one hundred microreactors are required to have a material residing therein. They could have more than one material in each of the at least one hundred reactors, but each of one hundred reactors has to have at least one material residing therein.

Such plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. See, for example, the specification at page 29, lines 43-46.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the inventions and would understand whether or not they infringe these claims. As such, these claims are not indefinite under 35 U.S.C. § 112, second paragraph.

*Claim 119*

Referring to claim 119 (the requirements of which have now been included in claim 116), the Office action queries (i) whether "material-containing" describes the presence of materials in the laminate, and (ii) whether the addition of materials makes the laminate (or laminae) the material-containing laminate (or laminae). The Office action also asks (iii) whether the material-containing laminate is a thin film of material-containing particles and (iv) whether the material-containing laminate is the totality of the plurality of laminae with the addition of materials? (See paragraph 8 at page 3 of the Office action.)

Based on a plain reading of the language of claim 119, the at least four materials are simultaneously loaded into their corresponding microreactors as a material-containing laminate.

*Cancelled*

The material-containing laminate is required to comprise a substrate and four or more materials at separate portions of the substrate. At least one of the plurality of laminae (in which each of the four or more microreactors are formed) must be a material-containing laminate. Accordingly, a person of ordinary skill in the art would understand that the phrase “material-containing” is an adjective that modifies the word “laminate” to identify that laminate and to distinguish that laminate from other laminates that make up the plurality of laminae in which the microreactors are formed. Hence, the laminate which supports the materials during delivery into the microreactors is referred to as the material-containing laminate both before and after the materials are provided thereto. Also, in this claim, it would be expressly understood based on a plain reading of the claim language that the material-containing laminate comprises the four or more materials to be present on a substrate. These materials may be present as thin films or in bulk form. Hence, it is clear that the material containing laminate is one of the plurality of laminae that form the laminate structure in which the multiple microreactors are formed.

This plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. *See generally*, for example, the specification: at page 15, line 24 through page 16, line 11; at page 29, line 41 through page 32, line 25; and page 37, line 33 through page 38, line 14. *See more specifically*, for example, Fig. 2, Figs. 4A through 4C, Fig. 8, Fig. 18A and Fig. 18J and the accompanying description in the specification.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the invention and would understand whether or not they infringe this claim. As such, the claim is not indefinite under 35 U.S.C. § 112, second paragraph.

#### *Claim 120*

The Office action asks, with regard to claim 120, (i) whether the reference to “a second laminate or laminates” means that the second laminate can be made up of a plurality of laminates. Also, the Office action (ii) notes a lack of antecedent basis with respect to “materials-containing first laminate”. Further, the Office action (iii) recommends indicating the laminate to which the “first surface” refers. Finally, the Office action asks (iv) how the wells are arranged to correspond to the arrangement of materials. (*See paragraph 9 at pages 3-4 of the Office action*).

Applicants have amended claim 120, without changing the substantive scope thereof, to obviate the above-noted concerns (i), (ii) and (iii). Specifically, the claim amendments clarify that the material-containing first laminate is engaged with either a second laminate, or alternatively, with a second composite substructure that comprises a plurality of laminates. Also, Applicants have more clearly set forth the antecedent basis for materials-containing first laminate, and have indicated the laminate to which the "first surface" refers, as suggested by the Examiner.

With regard to the concern (iv) relating to the arrangement of wells, Applicants respectfully assert that a person of ordinary skill in the art would be reasonably apprised of the scope of the claims based on their plain meaning, particularly when understood in the context of the specification. The claims expressly require that wells formed in the second laminate or composite substructure correspond to the arrangement of materials on the materials-containing first laminate. It is also required that surfaces are engaged such that an array of material-containing microreactors are formed. Accordingly, it would be abundantly clear to a person of skill in the art that the wells and the materials have a spatial relationship adequate to allow candidate materials to be situated at least partially within each of the four or more microreactors formed upon engagement of the respective surfaces.

This plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. *See* generally, for example, the specification at page 51, lines 2-32.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the invention and would understand whether or not they infringe this claim. As such, the claim is not indefinite under 35 U.S.C. § 112, second paragraph.

#### *Claims 119-122*

The Office action notes an antecedent basis concern for "materials-containing laminate" (as distinguished from "material-containing laminate"). (*See* paragraph 10 at page 4 of the Office action).

119  
This basis for rejection is moot as to claim 199, now cancelled. This basis for rejection is obviated in view of the amendment to claim 120-122 which corrects the typographical error re "materials-containing laminate".

*Claim 123*

The Office action asserts a lack of antecedent basis concern for "materials-containing microreactors" as recited in claim 123. (See paragraph 11 at page 4 of the Office action).

This basis for rejection is obviated in view of the amendment to claim 123.

*Claim 128*

With regard to claim 128, the Office action asserts a lack of clarity with regard to whether the array of candidate materials is describing a film material or a lamina or laminate. (See paragraph 12 at page 4 of the Office action).

Applicants respectfully traverse this basis for rejection.

This meaning of claim 128 is clear on its face. The claim expressly requires that the materials are loaded into the microreactors as an array of candidate materials. The array of candidate materials is required to comprise a substantially planar substrate and four or more materials at separate portions of a substrate.

This plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. See generally, for example, the description of arrays and substrates and candidate materials as set forth in the specification at page 29, line 42 through page 36, line 13. Among other aspects, this description notes for example, that the materials can be provided on a substrate as solids, and that the solids can be in the form of a thin-film or bulk. (See for example, page 30, line 22 through page 31, line 1, and also page 33, line 15 through page 36, line 3).

As such, the purported lack of clarity is therefore unfounded, and this basis for rejection should be withdrawn.

*Claim 140*

With regard to claim 140, the Office action asserts a lack of clarity as to whether "simultaneously" refers to a temporal relation between separating all the components of one of



the effluent streams, or a temporal relation between separating at least one component of different effluent streams. (See paragraph 13 at page 4 of the Office action).

The plain language of claim 140 requires simultaneously separating *one* or more components of the reactor effluents *in the four or more microseparators*. Since only one component is required to be separated, and since the claim expressly refers to separation in the four or more microreactors, a person of ordinary skill would understand, based on this plain language, that the required temporal relationship denoted by "simultaneously separating" refers to the separations occurring as compared between different effluent streams in different microseparators.

This plain reading of the claim is consistent with the description of the invention as set forth in the specification and figures. See, for example, the specification at page 67, lines 3-10 and at page 76, line 21 through page 77, line 7.

In view of the plain claim language and the extensive description relevant to this point, a person of ordinary skill in the art would be reasonably apprised as to the scope of the invention and would understand whether or not they infringe this claim. As such, the claim is not indefinite under 35 U.S.C. § 112, second paragraph.

#### *Claim 145*

The Office action asks, with respect to claim 145, for clarification between the number of materials and number of microreactors. (See paragraph 14 at page 4 of the Office action).

This basis for rejection is obviated in view of the amendments to claim 145 (and claims depending therefrom). As described in the specification, not all of the microreactors of a chemical processing microsystem have to have materials therein. As such, the as-filed claim was abundantly clear. Nonetheless, this claim has been amended to claim a preferred embodiment of Applicants invention having substantial commercial significance. The as-amended claim requires that at least twenty five materials are individually resident in twenty five separate microreactors.

#### *Claims 152-154*

The Office action raises several questions related to claims 152-154 regarding varying and/or controlling residence times, and the relationship between flow rates and residence times.

(See paragraph 15 at page 4 of the Office action).

Applicants traverse this basis for rejection, since there is no lack of clarity in the claims. That is, an ordinarily-skilled person would reasonably understand the scope of these claims based on their plain language alone, and further in view of the teaching of the specification. For example, as explained in the specification at page 60, lines 12-30, residence times can be controlled or varied according to several approaches, including generally by controlling or varying flow rates or reactor volumes.

Since the claim language itself raises no issues of clarity, this basis for rejection should be withdrawn.

#### *Claim 162*

The Office action queries, with regard to claim 162, how one can control a first set of reaction conditions to be the same in each of four or more reactors and control a second set of reaction conditions to be varied between two or more of the microreactors. (See paragraph 16 at page 5 of the Office action).

This basis for rejection is obviated in view of the amendments to claim 162. These amendments clarify, for example, that a set of reaction conditions refers to the collective group of reaction conditions (*e.g.*, temperature, pressure, residence time, *etc.*) associated with a single particular microreactor. In some operational embodiments, a set of reaction conditions can be substantially the same as compared between microreactors – for example, where it is desired to evaluate differences in the catalytic activity of candidate catalyst materials independently of the reaction conditions. In other operational embodiments, a set of reaction conditions can be different as compared between microreactors – for example, where it is desired to evaluate or optimize reaction conditions for a particular same candidate catalyst material. Accordingly, one or more individual reaction conditions (*e.g.*, temperature) can be the same or varied as compared between microreactors. Hence, with respect to claim 162, for example, a first reaction condition (*e.g.*, temperature) is controlled to be the same between the microreactors, while a second reaction condition (*e.g.*, flow-rate) is controlled to be varied between at least two of the microreactors. As another example, pressure could be varied between at least two microreactors while flow-rate is maintained to be the same as compared between microreactors. *See*,

for example, page 90, line 15 through page 91, line 22, with reference in context to page 58, line 6 through page 61, line 13.

Accordingly, an ordinarily-skilled person would reasonably understand the scope of this claim, as-amended, based on its plain language, and further in view of the teaching of the specification. As such, this basis for rejection should be withdrawn.

*Claims 151-154, 162, 165 and 166*

The Office action queries, with regard to claims 151-154, whether the recited sets of reaction conditions refer to a single condition (*e.g.*, temperature) across multiple microreactors, or to a set of conditions (*e.g.*, temperature, pressure) for a particular microreactor. (*See* paragraph 17 at page 5 of the Office action).

This for rejection is obviated in view of the aforementioned amendments and associated remarks relating to claim 162.

### Claims 184-185

The Office action states that claims 184 and 185 are rejected as being indefinite under 35 U.S.C. § 112, second paragraph, but does not articulate any basis for this rejection. Clarification is respectfully requested.

In view of the aforementioned remarks, it is clear that a person of ordinary skill in the art would be reasonably apprised as to whether or not they infringe the presently-pending claims.

### Rejections Under 35 U.S.C. § 103(a) (Senkan and Various Other References)

The Office action rejects certain claims under 35 U.S.C. § 102(e)/103(a) as being obvious over one or more references in combination with U.S. Patent No. 6,426,226 to Senkan. In particular, the Office action rejects:

- o claims 116-119, 123, 126-128, 130, 139, 142-145, 150-156, 159, 160, 184 and 185 as being obvious over Senkan'226 (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.* (See paragraph 21 at pages 6-13 of the Office action);

- claims 119-122 as being obvious over Senkan '226 (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and further in view of Senkan '226 (Embodiment 2). (See paragraph 22 at pages 13-15 of the Office action);
- claims 120-122 and 129 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of Senkan '226 (Embodiment 2) and/or U.S. Patent No. 5,935,277 to Autenrieth *et al.* (See paragraph 23 at pages 15-17 of the Office action).
- claims 124 and 125 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of U.S. Patent No. 4,921,919 to Lin *et al.* and/or U.S. Patent No. 5,079,205 to Cinch. (See paragraph 24 at pages 17-18 of the Office action).
- claims 131-138 and 141 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and U.S. Patent No. 5,959,297 to Weinberg *et al.* and/or U.S. Patent No. 6,087,181 to Cong and/or U.S. Patent No. 6,485,692 to Freitag *et al.* (See paragraph 25 at pages 18-26 of the Office action).
- claims 140, 162 and 164-166 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and U.S. Patent No. 6,103,199 to Bjorson *et al.* and U.S. Patent No. 5,959,297 to Weinberg *et al.* and/or U.S. Patent No. 3,797,202 to Neulander *et al.* and/or U.S. Patent No. 6,485,692 to Freitag *et al.* (See paragraph 26 at pages 26-33 of the Office action).
- claims 146, 147 and 149 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of U.S. Patent No. 6,149,882 to Guan *et al.*, and/or U.S. Patent No. 5,935,277 to Autenrieth *et al.* and/or U.S. Patent No. 3,966,420 to Pegels *et al.* (See paragraph 27 at pages 34-35 of the Office action).
- claim 148 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of U.S. Patent No. 6,149,882 to Guan *et al.*, and/or U.S. Patent

No. 5,935,277 to Autenrieth *et al.* and/or U.S. Patent No. 3,966,420 to Pegels *et al.*, and further in view of U.S. Patent No. 5,959,297 to Weinberg *et al.* (See paragraph 28 at pages 35-36 of the Office action).

- o claim 157 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of WO 96/15576 to Zanzucchi *et al.* (See paragraph 29 at pages 36-37 of the Office action).
- o claim 158 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and further in view of U.S. Patent No. 5,959,297 to Weinberg *et al.* and/or U.S. Patent No. 6,087,181 to Cong. (See paragraph 30 at pages 37-38 of the Office action).
- o claim 163 as being obvious over U.S. Patent No. 6,426,226 to Senkan (Embodiment 1) in view of U.S. Patent No. 5,580,523 to Bard and/or U.S. Patent No. 6,485,692 to Freitag *et al.*, and U.S. Patent No. 6,103,199 to Bjorson *et al.* and U.S. Patent No. 5,959,297 to Weinberg *et al.* and/or U.S. Patent No. 3,797,202 to Neulander *et al.*, and further in view of Senkan '226 (Embodiment 2). (See paragraph 31 at pages 38-40 of the Office action).

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Applicants respectfully traverse these rejections.

At least one of the references relied upon in each of these rejections, U.S. Patent No. 6,426,226 to Senkan, does not constitute prior art to Applicants' invention. The references applied in various combinations with the Senkin '226 patent do not disclose or suggest each of the required features of Applicants' inventions as-claimed. Therefore, the Office action does not establish a *prima facie* case of obviousness.

Applicants respectfully submit that U.S. Patent No. 6,426,226 to Senkan does not constitute prior art to Applicants' invention under 35 U.S.C. § 102(e). As identified on the front page of the '226 patent to Senkan, and as illustrated on the "timeline" sketch attached as Appendix 1 of this response, the application from which Senkan's '226 patent granted was filed on October 27, 2000 (as U.S. Ser. No. 09/697,162). As discussed in detail below, Applicants submit that this date – October 27, 2000 – is the effective 102(e) date for this reference, and that Senkan is not entitled to the benefit of its earlier-filed applications for purposes of establishing a § 102(e) date. Since Applicants' effective filing date for the instant application is the filing date

of its parent application – March 3, 2000, and since the parent itself claims the benefit of an earlier-filed provisional application having a priority date of March 3, 1999, the Senkan reference is not prior art to the instant application.

Recent changes to the law regarding 35 U.S.C. § 102(e) have clarified the analysis for determining when an application of one inventive entity can be prior art to another applicant. More specifically, amendments made to 35 U.S.C. § 102(e) by H.R. 2215 (“Technical Amendment Act”) enacted November 2, 2002 and retroactively effective as of November 29, 2000 have resulted in an analysis that is applied to all pending applications regardless of the filing date of the application, and therefore applies to the instant application. Significantly, the law is clear that U.S. patent applications that are derived from or claim priority to international applications (*e.g.*, PCT applications) may be applied as prior art as of the effective date of the *international application* if and only if all of the following three conditions are met: (i) the filing date of the international application is on or after November 29, 2000; (ii) the international application designated the U.S. and (iii) the international application was published in English. If one of these conditions is not met, then the effective filing date for § 102(e) purposes is the filing date of the actual U.S. application – not the filing date of the international application.

In the current situation, the application from which Senkan’s ‘226 patent granted was filed on October 27, 2000 (as U.S. Ser. No. 09/697,162). This application is said to be a continuation of an international PCT application filed on November 11, 1999 (as PCT/GB99/03767). The PCT application itself is said to be a continuation of an earlier-filed U.S. application filed November 12, 1998 (as U.S. Ser. No. 09/191,849), subsequently abandoned.<sup>1</sup> However, since the international PCT application from which Senkan’s 09/697,162 application claims priority was filed before November 29, 2000, the filing date of the international PCT application cannot be applied as the effective § 102(e) filing date for the Senkan ‘226 application.

This situation is discussed in a PTO Memorandum dated November 4, 2002 from Stephen G. Kunin to Technology Center Directors, a copy of which is attached hereto as Appendix 2. Moreover, Examination Guidelines published by the PTO, a copy of which is

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<sup>1</sup> Further earlier-filed applications are also present in the priority claim, but are irrelevant in connection with the present analysis, and discussion thereof is therefore omitted for the sake of brevity and clarity.

attached as Appendix 3, further illustrate this situation. (See Example 9 at page 17 thereof.) See also, the PTO's website at

[http://www.uspto.gov/web/offices/dcom/olia/aipa/102e\\_hr2215slides.pps](http://www.uspto.gov/web/offices/dcom/olia/aipa/102e_hr2215slides.pps)

which provides a slide presentation prepared by Robert J. Spar dated November 14, 2002 regarding the changes under H.R. 2215. This slide presentation demonstrates an exactly analogous situation in one of the slides, a copy of which is included as Appendix 4 hereof.

Since the application leading to the Senkan '226 patent is not prior art to the instant invention, these bases for rejection are obviated. Additionally, and independently, Applicants submit that even if the Senkan reference were prior art, it does not make the invention defined by the aforementioned claims obvious, either alone or in the various combinations set forth in the Office action, since it does not disclose all of the required features thereof.<sup>2</sup>

As such, the Office action does not set forth a *prima facie* case of obviousness with respect to the aforementioned rejections. Accordingly, Applicants respectfully request that these basis for rejection be withdrawn.

Provisional Rejection Under 35 U.S.C. § 103(a)/102(e) (Copending U.S. Ser. No. 09/607,535)

The Office action rejects claims 116-118, 123, 126, 127, 129-134, 135-139, 141-154, 156-160, 162-166, 184 and 185 under 35 U.S.C. § 103(a)/102(e) as being obvious over co-pending application, U.S. Ser. No. 09/607,535 to Guan *et al.* (See paragraph 32 at pages 40-41 of the Office action).

Applicants respectfully submit that based upon 35 U.S.C. 103(c), the aforementioned copending application is not prior art under 35 U.S.C. § 103(a)/102(e) since (i) the present application was filed after November 29, 1999 and (ii) the subject matter of the '535 application and the presently-claimed invention were, at the time the present invention was made, owned by the same person or subject to an obligation of assignment to the same person. In support thereof, Applicants are submitting as Appendix 5 hereof, the Declaration of Paul A. Stone and associated therewith, copies of the respective assignments for each of these cases.

Guan  
withdrawn

<sup>2</sup> Applicants disagree with many of the assertions made in the Office action about what the Senkan '226 reference discloses and/or how such disclosure relates to Applicants invention as claimed. Applicants are not making any admissions and are not acquiescing with respect to any statement made in the Office action relating to the disclosure of the Senkan '226 patent.

Rejection Under 35 U.S.C. § 103(a)/102(e) (Copending US 2002/0042140)

The Office action rejects claims 116-118, 123, 126, 127, 129-134, 135-139, 141-154, 156-160, 162-166, 184 and 185 under 35 U.S.C. § 103(a)/102(e) as being obvious over co-pending application, U.S. Ser. No. 09/901,858, now published as US 2002/0042140. (See paragraph 33 at pages 41-42 of the Office action).

Applicants respectfully submit that the aforementioned copending application is not prior art under 35 U.S.C. § 103(a)/102(e) since, contrary to the assertion in the Office action, it does not have an earlier effective filing date than the instant application. The earliest effective filing date of the cited reference is based on a priority claim to U.S. Serial No. 60/122,704 filed March 3, 1999 by Bergh et al. The earliest priority claim for the instant application is to the same application, U.S. Serial No. 60/122,704, filed March 3, 1999 by Bergh *et al.* As such, the earliest effective filing dates for the instant application and the cited reference application are the same. The next-earliest priority claim for the cited reference is U.S. Serial No. 09/518,794, filed March 3, 2000 by Bergh *et al.* The next-earliest priority claim for the instant application is to the same application, U.S. Serial No. 09/518,794, filed March 3, 2000, which is the direct parent of the instant application. All other priority claims of the cited reference application are to applications filed after the effective filing date of the instant application. As such, there is no basis for asserting that the cited reference has an earlier effective filing date than the instant application.

possibly?

The cited reference is, therefore, not prior art under 35 U.S.C. § 103(a)/102(e).<sup>3</sup> Accordingly, this basis for rejection should be withdrawn.

*Provisional Obvious-Type Double-Patenting Rejections*

Claims 116-118, 123, 126, 127, 129-134, 135-139, 141-154, 156-160, 162-166, 184 and 185 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 61, 62, 65, 66, 70-72, 82-92, 94,

<sup>3</sup> Applicants also note that the cited reference application is not prior art for other reasons. For example, the copending reference application is not prior art under 35 U.S.C. § 103(a)/102(e) in view of 35 U.S.C. 103(c), and further, since the reference application was not filed before the date of invention of the present application. If necessary, Applicants will provide evidence in support of these additional reasons.



96, 98-103 of copending Application Serial No. 09/607,535 to Guan *et al.* (See paragraph 35 at pages 43-45 of the Office action).

*Claims 116-118*

This basis for rejection is obviated with respect to claims 116-118, in view of the *not sure* amendment to claim 116 (incorporating the requirements of claim 119, now canceled).

*Claims 123, 126, 127 and 129*

Applicants respectfully traverse this basis for rejection with respect to claims 123, 126, 127 and 129 in view of the amendments to claim 123 and the following remarks.

Independent claim 123 requires, among other features, that at least four or more candidate catalyst materials are simultaneously loaded into respective four or more microreactors.

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes simultaneously loading of candidate catalyst materials into respective cavities of a microreactor. As such, the Office action does not set forth a *prima facie* case of obviousness.

*says "simultaneously flowing test fluid" obvious to have already simultaneously loaded catalysts*

Further, the Office action appears to discount the differences in volume requirements, *obvious* without considering the claim as a whole. For example, the Office action does not appear to adequately address why a person skilled in the art would have been motivated to modify existing systems by reducing reactor volumes, while providing for efficiently loading catalyst materials into small-volume microreactors (*e.g.*, claim 123) for the parallel chemical reactions, and in some embodiments, also providing for efficiently unloading catalyst materials after the reactions (*e.g.*, claim 129) from such microreactors. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claim 123, and claims 125, 127 and 129 each depending therefrom.

*Claim 130*

Applicants respectfully traverse this basis for rejection with respect to claim 130, in view of the following remarks.

Independent claim 130 requires, among other features, that at least four or more candidate catalyst materials are loaded into respective four or more microreactors without affecting the structural integrity of the associated distribution system. ?

intrinsic?

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes loading of candidate catalyst materials into respective cavities of a microreactor without affecting the structural integrity of either the inlet or outlet distribution systems. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claim 130.

#### Claims 131-138

Applicants respectfully traverse this basis for rejection with respect to claims 131-138, in view of the following remarks.

Independent claim 131 requires, among other features, evaluating at least four candidate catalysts such that the difference in time between the start of the method – loading, and the end of the method – evaluating catalytic activity, is less than about three hours. Independent claim 135 requires, among other features, that at least ten candidate catalysts are evaluated for catalytic activity at a throughput of not less than about 10 candidate catalyst materials per hour.

may be since '535 for screening time

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes efficiently loading of candidate catalyst materials into respective cavities of a microreactor such that the recited efficiencies are demonstrated. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claims 131 and 135, and claims depending therefrom.

#### Claims 139

Applicants respectfully traverse this basis for rejection with respect to claims 139 in view of the following remarks.

Independent claim 139 requires, among other features, evaluating at least four candidate catalysts in four or more respective microreactors, where the microreactors have, in combination,

intrinsic

a reactor geometry selected and reaction conditions controlled such that the residence time is longer than the diffusion period for the reaction cavity, thereby effectively providing for diffusion-mixed microreactors.

intrinsic?  
stays in  
cavity longer  
than takes  
to leave

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes use of a reactor having such design. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claims 139.

#### *Claims 141-144*

Applicants respectfully traverse the rejection with regard to claims 141-145, each of which are dependent claims, for the reasons stated above with respect to the claims from which they depend.

just volumes

#### *Claims 145-154 and 156-160*

Applicants respectfully traverse this basis for rejection with respect to claims 145-154 in view of the amendments to claim 145 and the following remarks.

Independent claim 145 requires, among other features, that twenty five or more candidate catalysts are loaded into their respective microreactor cavities using an automated material handling system.

→ case law  
in re Venter

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes use of such automated loading feature. As such, the Office action does not set forth a *prima facie* case of obviousness.

Further, the Office action appears to discount the requirements relating to the relatively high numbers of microreactors and relatively small volume requirements of microreactors, without adequately addressing why a person skilled in the art would have been motivated to modify existing systems to arrive at a system of the instant claims. In particular, the Office action does not explain how one would have been motivated to both increase numbers, and still provide for efficiently loading catalyst materials into microreactors (e.g., claims 145 and 146) for parallel chemical reactions, and in some embodiments, also providing for efficiently unloading

just volumes

catalyst materials after the reactions (e.g., claim 149) from such microreactors. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claim 145 and claims depending therefrom.

*Claim 162-166*

Applicants respectfully traverse this basis for rejection with respect to claims 162-166 in view of the following remarks.

Independent claim 162 requires, among other features, evaluating at least four candidate catalysts in four or more respective microreactors, where the microreactors have a reaction cavity with a very small volume (i.e., a volume of not more than about 10 microliters), and integrally combined with such microreactors, a dedicated set of four or more corresponding microseparators.

maybe  
microseparators

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes use of chemical processing microsystem having such features. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claim 162, and claims depending therefrom.

*Claims 184-185*

Applicants respectfully traverse this basis for rejection with respect to claims 184-185 in view of the following remarks.

Independent claim 184 requires, among other features, effecting a microscale reaction in a microscale flow reactor having a reaction cavity with a volume of not more than about 10 microliters, where the reactants reside in the reaction cavity under reaction conditions for a residence time that is longer than the diffusion period for the reaction cavity, thereby providing for a diffusion-mixed microreactor.

intrinsic  
obvious

However, neither the cited claims of the '535 application, nor the other references relied upon in combination therewith, disclose, teach or suggest a method that includes use of a reactor

having such design. As such, the Office action does not set forth a *prima facie* case of obviousness.

Hence, this basis for rejection should be withdrawn with respect to claim 184 and claim 185 depending therefrom.

#### *Common Ownership*

Applicants acknowledge the concern expressed in the Office action at page 44, last paragraph thereof. Applicants submit, however, that such concern is obviated in view of the aforementioned remarks demonstrating that the instant claims are patentably distinct from the subject matter claimed in the cited claims of the '535 application. Moreover, Applicants note that the inventions defined by the instant claims and the inventions defined by the claims of the cited claims of the '535 application were commonly owned at the time this invention was made. *See*, the discussion above in connection with the 103(a)/102(e) rejection based on the '535 application, and the related Appendix 5. ??

#### Equivalents

The amendments to the claim and the arguments presented in supplemental response to the Office action have been made to claim subject matter which the Applicants regard as their invention. By such amendments, the Applicants in no way intend to surrender any range of equivalents beyond that which is needed to patentably distinguish the claimed invention as a whole over the prior art. Applicants expressly reserve patent coverage to all such equivalents that may fall in the range between applicants literal claim recitations and those combinations that would have been obvious in view of the prior art. In particular, as noted above, many of the claims (*e.g.*, claims 121-123, 130, 131, 135, 139, 140, 149, 158, 162, 165 and 166) have not been narrowed within the meaning of *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 62 USPQ2d 1705 (2002), and some claims (*e.g.*, claim 116) have been amended solely for reasons unrelated to the statutory rejections made in the Office action. Applicants are therefore entitled to the full range of equivalents with respect to such claims. ~

Information Disclosure Statement

An Information Disclosure Statement is being filed on the date even herewith listing newly cited references. Consideration of the pending claims is respectfully requested, in particular, in view of the newly cited references.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

The Examiner is hereby authorized to charge the fees required in connection with this Amendment C to Deposit Account No. 50-0496, in accordance with the Transmittal submitted herewith. The Examiner is also authorized to debit any other fees required in connection with this application, or to credit any overpayment of fees in connection with this application to Deposit Account No. 50-0496.

Respectfully submitted,



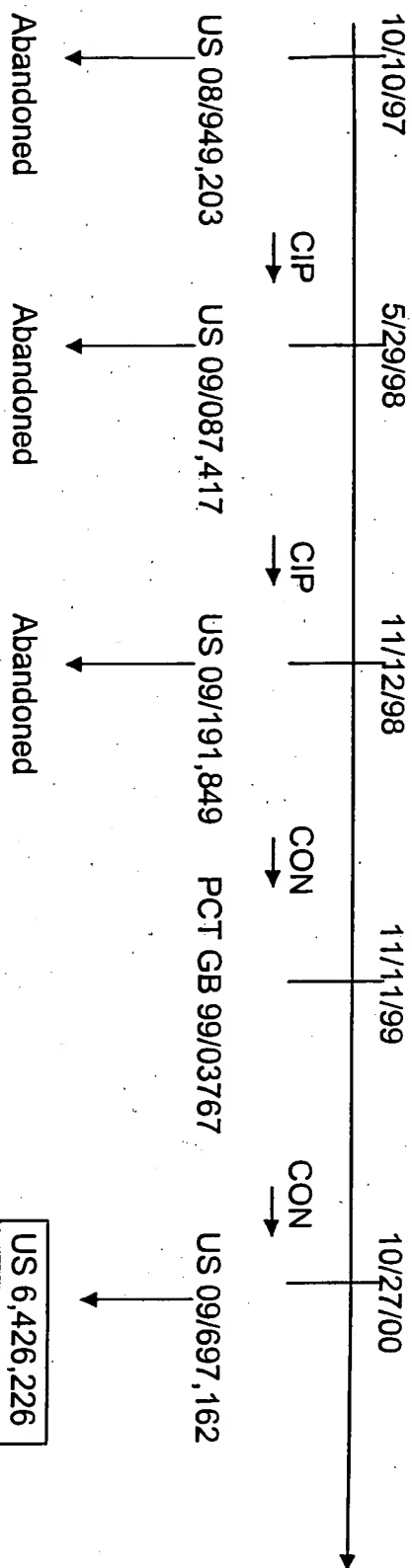
Paul A. Stone  
Reg. No. 38,628

Date Submitted: Sep. 19, 2003

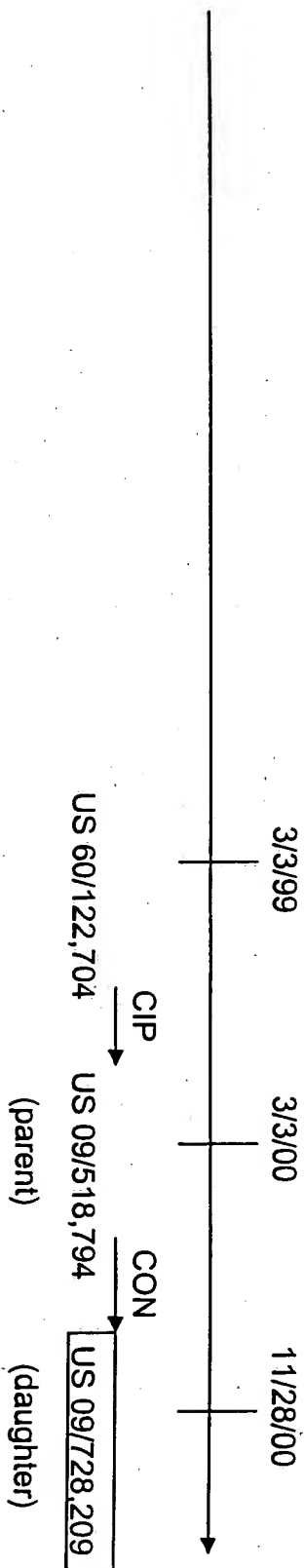
Symyx Technologies, Inc.  
3100 Central Expressway  
Santa Clara, CA 95051  
Phone: (408) 773-4027; Fax: (408) 773-4029

# APPENDIX I

U.S. Patent No. 6,426,226 to Senkan



U.S. Ser. No. 09/728,209 (Instant Application)





## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov

**MEMORANDUM**

**DATE:** November 4, 2002

**TO:** Technology Center Directors

**FROM:** Stephen G. Kunin  
Deputy Commissioner for Patent Examination Policy

**SUBJECT:** Revision to 35 U.S.C. § 102(e)

**Summary:** The recently enacted amendments to 35 U.S.C. § 102(e) make several changes to determining prior art under § 102(e). The revised provisions allow the use of certain WIPO and U.S. application publications and certain U.S. patents as prior art under 35 U.S.C. § 102(e) as of their respective U.S. filing dates, including certain international filing dates. The revised provisions in 35 U.S.C. § 102(e) are completely retroactive and, **effective immediately, must always** be applied in making patentability determinations in any application being examined or patent being reexamined. Thus, the newly amended § 102(e) completely nullifies the changes to § 102(e) made by the AIPA. Accordingly, the filing date of the application being examined (or patent being reexamined) no longer determines which version of 35 U.S.C. § 102(e) is used. The disclosure of an application that is issued as a U.S. patent, or published as a U.S. application publication, or a WIPO publication of an international (PCT) application (IA), will be applied as prior art as of the same prior art date unless the application is an IA filed before November 29, 2000, or it claims the benefit of the filing date of an IA filed before November 29, 2000.

**Prior Art Dates:**

**Non-IA U.S. filing dates as prior art dates:** U.S. application publications and U.S. patents, that did **not** result from the national stage of an IA (*i.e.*, did not result from a 35 U.S.C. § 371 application) and that do **not** claim the benefit of a prior IA, may be applied as prior art as of the actual filing date under 35 U.S.C. § 111(a), or any filing date claimed under 35 U.S.C. §§ 119(e) or 120\*.

**IA filing dates as prior art dates:** The most significant change to 35 U.S.C. § 102(e) is that certain IA filing dates are U.S. filing dates for prior art purposes. U.S. and WIPO application publications and U.S. patents, which are derived from IAs or claim the benefit of IA filing dates\* (per 35 U.S.C. § 365(c)), may be applied as prior art as of the IA filing dates but only if all of the following conditions are true:

- The international filing date is: **on or after November 29, 2000;**
- The IA **designated the U.S.;** and
- The IA was **published in English.**

If an IA meets the above conditions, a further claim of benefit in the IA will enable the prior art date to be any date claimed under 35 U.S.C. §§ 119(e), 120, or 365(c)<sup>1\*</sup>.

\* Use of the earlier application's filing date is appropriate only if the relied upon application(s) supports the subject matter used to make the rejection. See MPEP 2136.03 parts III and IV.



**The Exception:** Patents issued from IAs filed prior to **November 29, 2000** may be applied as of the date of compliance with 35 USC § 371(c)(1), (2) and (4). U.S. application publications and WIPO publications of IA's filed prior to **November 29, 2000** may not be applied as of the IA filing date or the § 371(c)(1),(2) and (4) date.

**Foreign priority:** While applications that have been published as U.S. or WIPO application publications, or patented in the U.S., may have proper priority claims to foreign applications per 35 U.S.C. §§ 119(a)-(d) or 365(a), the foreign applications' filing dates may never be used as the prior art dates of such publication or patent references. This would, similarly, preclude usage of international filing dates when they are claimed as foreign priority dates under 35 U.S.C. § 365(a).

#### **Implementation Issues:**

**Final rejection practice:** If a second or subsequent action contains a new ground of rejection necessitated by the change to 35 U.S.C. § 102(e) that was not also necessitated by an amendment to the claims or as a result of certain information disclosure statements (See MPEP 706.02(a)), that action cannot be made final. See MPEP 706.07(a).

**Implementation Materials:** To help examiners understand the revised provisions of § 102(e), and to facilitate the transition to the examination practices to be followed now that the revised § 102(e) is always applicable, the following materials are being provided:

- Appendix I: Examination Guidelines (O.G. Notice)
- Appendix II: Training slides with a number of examples
- Appendix III: Flowchart to determine prior art applicability
- Appendix IV: Revised Form Paragraphs (e-version to be available prior to OACS revision)

The MPEP and the form paragraphs in OACS shall be revised to adopt these materials in due course.

**Further Assistance:** Contact Rob Clarke (305-9177), Senior Legal Advisor, or Jeanne Clark (306-5603), Legal Advisor, OPLA, if you have any questions or desire assistance for special circumstances. Alternately, you may send an e-mail to "Patent Practice", the OPLA e-mail address that has been established for receiving queries and questions about patent practice and procedures.

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<sup>1</sup> If the parent and child applications are IAs, both of the IAs must satisfy the three conditions to be applied as of the earlier IA filing date.

**Examination Guidelines for 35 U.S.C. § 102(e), as amended by the American Inventors Protection Act of 1999, and further amended by the Intellectual Property and High Technology Technical Amendments Act of 2002, and 35 U.S.C. § 102(g)**  
(Revised <sup>1</sup>)

This notice sets forth the interpretation by the United States Patent and Trademark Office (USPTO or Office) of 35 U.S.C. §§ 102(e) and 374, as amended by the American Inventors Protection Act of 1999 (AIPA) (Pub. L. 106-113, 113 Stat. 1501 (1999)), and as further amended by the Intellectual Property and High Technology Technical Amendments Act of 2002 (H.R. 2215) (Pub. L. 107-273 (2002)). This notice also clarifies the Office's policy on prior art rejections based on 35 U.S.C. § 102(g).

Generally, 35 U.S.C. § 102(e), after enactment of the AIPA and H.R. 2215, is similar to the pre-AIPA § 102(e), with two significant differences, which may be summarized as: (1) in addition to U.S. patents, now certain **publications** of U.S. and international applications may be applied as of their filing dates in a prior art rejection; and (2) **certain international filing dates** are now U.S. filing dates for prior art purposes under § 102(e), and U.S. patents and certain application publications may now be applied as of these international filing dates in a prior art rejection.

Specifically, this notice provides guidance that prior art, as defined by § 102(e) of the patent code in effect on November 29, 2000, includes U.S. patents, publications of U.S. patent applications and World Intellectual Property Organization's (WIPO) publications of international applications, provided such references do not directly or indirectly result from an international application filed before November 29, 2000. If a U.S. patent resulted from an international application filed before November 29, 2000, the U.S. patent will have a prior art date per § 102(e) in effect prior to November 29, 2000, which is the earlier of the date of compliance with § 371(c)(1), (2) and (4) of the patent code (e.g. National Stage entry) or the filing date of the later-filed U.S. application that claimed the benefit of the international application. A U.S. or WIPO publication of an international application filed prior to November 29, 2000 will have no prior art effect under § 102(e). Such publications do, however, have prior art effect under § 102(a) or (b) as of their publication dates.

Furthermore, all pending U.S. patent applications being examined, and all U.S. patents being reexamined, or otherwise being contested, whenever filed, are subject to the amended version of § 102(e).

This notice also provides examples of the determination of § 102(e) dates for references based on the most common factual scenarios. The examples that best highlight the recent change to §§ 102(e) and 374 are the examples that involve a WIPO publication of an international application under PCT Article 21(2), a U.S. publication of an international application, or a U.S. patent derived from an international application.

The policy and practice set forth in the Official Gazette Notice entitled "Examination Guidelines for 35 U.S.C. § 102(e)(2), as amended by the American Inventors Protection Act of 1999," 1243 O.G. 1037 (Feb. 27, 2001) and guidelines provided in the Manual of

Patent Examining Procedure (MPEP) concerning the changes made by the AIPA to 35 U.S.C. § 102(e) (e.g., MPEP 706.02(a), Part II; 901.03; 1895.01, Part E; 1896; and 2136 et seq., Eighth Edition (August 2001)) are superceded by this notice and should no longer be followed.

### SIGNIFICANT PROVISIONS:

#### **A. Effective Date Provisions of the Amendments.**

The technical correction legislation in H.R. 2215 provides for the application of revised 35 U.S.C. § 102(e) in the examination of all applications, whenever filed, and the reexamination of, or other proceedings to contest, all patents. The filing date of the application is no longer relevant in determining what version of § 102(e) to apply in determining the patentability of that application, or the patent resulting from that application. The revised statutory provisions supercede all previous versions of §§ 102(e) and 374, with only one exception, which is when the potential reference is based on an international application filed prior to November 29, 2000 (discussed further in section D below). Furthermore, the provisions amending §§ 102(e) and 374 in H.R. 2215 are completely retroactive to the effective date of the relevant provisions in the AIPA (November 29, 2000).

#### **B. U.S. and WIPO application publications may have a § 102(e)(1) prior art date.**

Paragraph (e) of 35 U.S.C. § 102 was amended by the AIPA to create two separate clauses, namely, § 102(e)(1) for **publications** of patent applications and § 102(e)(2) for patents. Section 102(e)(1), in combination with amended § 374, created a new category of prior art by providing prior art effect for certain **publications** of patent applications, including international applications, as of their effective United States filing dates (which will include certain international filing dates). Under H.R. 2215's revised § 102(e), an international filing date, which is on or after November 29, 2000, is a United States filing date for prior art purposes under 35 U.S.C. § 102(e) if the international application designated the United States and was published by the World Intellectual Property Organization (WIPO) under the Patent Cooperation Treaty (PCT) Article 21(2) in the English language. Publication under PCT Article 21(2) may result from a request for early publication by an international applicant or after the expiration of 18-months after the earliest claimed filing date in an international application. An applicant that has designated only the U.S. would continue to be required to request publication from WIPO as the reservation under PCT Article 64(4) continues to be in effect for such applicants.

#### **C. A patent from an international application may have a § 102(e)(2) prior art date of its international filing date.**

Paragraph (e) of 35 U.S.C. § 102 was also amended by the AIPA to eliminate the reference to fulfillment of the 35 U.S.C. § 371(c)(1), (2) and (4) requirements. As a result, United States **patents** issued directly from international applications filed on or after November 29, 2000 will no longer be available as prior art under § 102(e) as of the date the requirements of § 371(c)(1), (2) and (4) have been satisfied. Under § 102(e)(2), as amended by the AIPA and H.R. 2215, an international filing date, which is on or after November 29, 2000, is a United States filing date for purposes of determining the earliest

effective prior art date of a patent if the international application designated the United States and was published in the English language under PCT Article 21(2) by WIPO.

**D. International filing dates prior to November 29, 2000 cannot be used under § 102(e) for prior art purposes.**

No international filing dates prior to November 29, 2000 may be relied upon as a prior art date under § 102(e) in accordance with the last sentence of the effective date provisions (reproduced below in section I). **Patents** issued directly, or indirectly, from international applications filed before November 29, 2000 may only be used as prior art based on the provisions of § 102(e) in effect before November 29, 2000. Thus, the date of such a prior art patent is the earliest of the date of compliance with 35 U.S.C. § 371(c)(1), (2) and (4), or the filing date of the later-filed U.S. continuing application that claimed the benefit of the international application. **Publications** of international applications filed before November 29, 2000 (which would include WIPO publications and U.S. publications of the National Stage (§ 371)) do not have a § 102(e) date at all. Specifically, under § 374, the international application must be filed on or after November 29, 2000 for its WIPO publication to be “deemed a publication under section 122(b)” and thus available as a possible prior art reference under § 102(e) as amended by the AIPA.

**E. Additional requirements for international applications filed on or after November 29, 2000.**

If an international application was filed on or after November 29, 2000, the international application must have **designated the U.S.** and been **published in English** under PCT Article 21(2) by WIPO in order for its international filing date to be a U.S. filing date for purposes of § 102(e) and be relied upon as a prior art date.

**F. When an international application cannot serve as a bridge to an earlier-filed application.**

International applications, which: (1) were filed prior to November 29, 2000, (2) did not designate the U.S., or (3) were not published in English under PCT Article 21(2) by WIPO, may not be used to reach back (bridge) to an earlier filing date through a priority or benefit claim for prior art purposes under 35 U.S.C. § 102(e).

**DISCUSSION:** Sections I–V below set forth the USPTO’s examination procedures for the amendments to 35 U.S.C. § 102(e) made by the AIPA and H.R. 2215.

**I) Statutory Language of 35 U.S.C. §§ 102(e) and 374:**

*Pre-AIPA § 102(e): Now, only applies to Patents derived from International Applications filed before November 29, 2000:*

“A person shall be entitled to a patent unless —

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the

requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by applicant for patent, or”.

Revised § 102(e): For examining all Applications, whenever filed, and for reexamining of all Patents, and for determining the prior art dates<sup>2</sup> of Patents and certain Application Publications:

A person shall be entitled to a patent unless  
 (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language; or

Pre-AIPA § 374: For WIPO Publications of International Applications filed prior to November 29, 2000:

The publication under the treaty of an international application shall confer no rights and shall have no effect under this title other than that of a printed publication.

Revised § 374: For WIPO Publications of International Applications filed on or after November 29, 2000:

The publication under the treaty defined in section 351(a) of this title, of an international application designating the United States shall be deemed a publication under section 122(b), except as provided in sections 102(e) and 154(d) of this title.

Effective Date Provisions for the amendments to §§ 102(e) and 374<sup>3</sup>, as amended by H.R. 2215:

Except as otherwise provided in this section, sections 4502 through 4504 and 4506 through 4507, and the amendments made by such sections, shall be effective as of November 29, 2000, and shall apply only to applications (including international applications designating the United States) filed on or after that date. The amendments made by section 4504 shall additionally apply to any pending application filed before November 29, 2000, if such pending application is published pursuant to a request of the applicant under such procedures as may be established by the Director.

Except as otherwise provided in this section, the amendments made by section 4505 shall be effective as of November 29, 2000 and shall apply to all patents and all applications for patents pending on or filed after November 29, 2000. Patents resulting from an international application filed before November 29, 2000 and applications published pursuant to section 122(b) or Article 21(2) of the treaty defined in section 351(a) resulting from an international application filed before November 29, 2000 shall not be effective as prior art as of the filing date of the international application; however, such patents shall be effective as prior art in accordance with section 102(e) in effect on November 28, 2000.

## II) Impact of Statutory Changes and Effective Date of the Changes

As shown above, 35 U.S.C. § 102(e) has been amended to have two separate clauses, namely, (e)(1) for **publications** of patent applications, and (e)(2) for **patents**.

With respect to revised 35 U.S.C. § 102(e)(1) and 35 U.S.C. § 374, a new category of prior art is created for **publications** of patent applications. This new category includes the following two types of published patent applications:

- (1) U.S. publications of patent applications filed in the United States by another which are published under § 122(b) of title 35, United States Code; and
- (2) U.S. and WIPO publications of international applications, filed on or after November 29, 2000, by another that designated the United States and were published in the English language under PCT Article 21(2) by WIPO.

In summary, under amended §§ 102(e)(1) and 374, certain **publications** of patent applications, including certain WIPO publications of international applications (under PCT Article 21(2)) which are filed on or after November 29, 2000, are considered to be prior art as of their earliest effective United States filing date. It is important to note that a U.S. application publication of a National Stage of an international application or a WIPO publication of an **international application** under §§ 102(e)(1) and 374, as amended by H.R. 2215, can be prior art as of the international filing date if the international application had an international **filing date on or after November 29, 2000, designated the United States**, and was **published in English** under PCT Article 21(2) by WIPO. Prior to the AIPA amendments to §§ 102(e) and 374, a WIPO publication of an international application could only be prior art under § 102(a) or (b) as of the publication date (and there were no U.S. application publications).

Paragraph (e) of 35 U.S.C. § 102 was also amended to modify what U.S. **patents** are available as prior art under this subsection. Section 102(e)(2) no longer recognizes the date of fulfillment of the 35 U.S.C. § 371(c)(1), (2) and (4) requirements for prior art purposes. Section § 102(e)(2), however, considers an international filing date that is on or after November 29, 2000 as a United States filing date for purposes of determining the earliest effective prior art date of a patent if the international application designated the United States and was published in the English language under PCT Article 21(2) by WIPO.

The AIPA and H.R. 2215 also establish when the amendments to §§ 102(e) and 374 must be applied. First, the AIPA and H.R. 2215 set forth that the amendments to § 102(e) apply to all applications being examined and all patents under reexamination. See the third sentence of § 4508 of the AIPA, as amended by H.R. 2215 (addressing § 4505 of the AIPA). In other words, the revised version of § 102(e) is completely retroactive, and it applies to all applications, no matter when filed, and all patents, with only one exception, which pertains to applying, as prior art under § 102(e), patents or publications based on international applications filed prior to November 29, 2000. Further, the amendments to § 374, which “deems” certain WIPO publications of international applications under PCT Article 21(2) as U.S. publications of applications filed under 35 U.S.C. § 111(a), are only effective for international applications filed on or after November 29, 2000. Therefore, an international application must be filed on or after November 29, 2000 for its WIPO publication to be “deemed a publication under section 122(b),” and thus available as a possible prior art reference under § 102(e)(1).

### III) Prior Art Rejections based on 35 U.S.C. § 102(g)

35 U.S.C. § 102(g) issues such as conception, reduction to practice and diligence, while more commonly applied to interference matters, also arise in other contexts.

35 U.S.C. § 102(g) may form the basis for an *ex parte* rejection if: (1) the subject matter at issue has been actually reduced to practice by another before the applicant's invention, and (2) there has been no abandonment, suppression or concealment. *See, e.g., Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1205, 18 USPQ2d 1016, 1020 (Fed. Cir. 1991); *New Idea Farm Equipment Corp. v. Sperry Corp.*, 916 F.2d 1561, 1566, 16 USPQ2d 1424, 1428 (Fed. Cir. 1990); *E.I. DuPont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1434, 7 USPQ2d 1129, 1132 (Fed. Cir. 1988); *Kimberly Clark v. Johnson & Johnson*, 745 F.2d 1437, 1444-46, 223 USPQ 603, 606-08 (Fed. Cir. 1984). To qualify as prior art under 35 U.S.C. § 102(g), however, there must be evidence that the subject matter was actually reduced to practice, in that conception alone is not sufficient. *See Kimberly Clark*, 745 F.2d at 1445, 223 USPQ at 607. While the filing of an application for patent is a constructive reduction to practice, the filing of an application does not in itself provide the evidence necessary to show an actual reduction to practice of any of the subject matter disclosed in the application as is necessary to provide the basis for an *ex parte* rejection under 35 U.S.C. § 102(g). Thus, absent evidence showing an actual reduction to practice (which is generally not available during *ex parte* examination), the disclosure of a United States patent application publication or patent falls under 35 U.S.C. § 102(e) and not under 35 U.S.C. § 102(g). *Cf. In re Zletz*, 893 F.2d 319, 323, 13 USPQ2d 1320, 1323 (Fed. Cir. 1990) (the disclosure in a reference United States patent does not fall under 35 U.S.C. § 102(g) but under 35 U.S.C. § 102(e)).

In addition, subject matter qualifying as prior art only under 35 U.S.C. § 102(g) may also be the basis for an *ex parte* rejection under 35 U.S.C. 103. *See In re Bass*, 474 F.2d 1276, 1283, 177 USPQ 178, 183 (CCPA 1973) (in an unsuccessful attempt to utilize a 37 CFR

1.131 affidavit relating to a combination application, applicants admitted that the subcombination screen of a copending application which issued as a patent was earlier conceived than the combination). 35 U.S.C. § 103(c), however, states that subsection (g) of 35 U.S.C. § 102 will not preclude patentability where subject matter developed by another person, that would otherwise qualify under 35 U.S.C. § 102(g), and the claimed invention of an application under examination were owned by the same person or subject to an obligation of assignment to the same person at the time the invention was made. See MPEP §§ 706.02(l) and 2146 (Eighth Edition (Aug. 2001)).

For additional examples of 35 U.S.C. § 102(g) issues such as conception, reduction to practice and diligence outside the context of interference matters, see *In re Costello*, 717 F.2d 1346, 219 USPQ 389 (Fed. Cir. 1983) (discussing the concepts of conception and constructive reduction to practice in the context of a declaration under 37 CFR 1.131), and *Kawai v. Metlesics*, 480 F.2d 880, 178 USPQ 158 (CCPA 1973) (holding constructive reduction to practice for priority under 35 U.S.C. § 119 requires meeting the requirements of 35 U.S.C. §§ 101 and 112).

#### IV) Examination Procedures under 35 U.S.C. §§ 102(e) and 374

- (1) Determine the effective filing date(s) of the application being examined.  
See the Manual of Patent Examining Procedure (MPEP), sections 706.02, 1893.03(b), 1893.03(c), 1895 and 1895.01, Eighth Edition (Aug. 2001) as revised by this notice.
- (2) Determine and perform an appropriate prior art search.  
The Examiner should search for the most relevant prior art under 35 U.S.C. §§ 102 and 103, including U.S. and WIPO **publications** of patent applications, and U.S. **patents** accorded prior art dates under § 102(e).
- (3) Determine if the potential reference under § 102(e) is "by another."  
The inventive entity of the application must be different than that of the reference in order to apply a reference under § 102(e). Note that, where there are joint inventors, only one inventor need be different for the inventive entities to be different and a rejection under § 102(e) may be applicable even if there are some common inventors. See MPEP 706.02(a), Eighth Edition (Aug. 2001) as revised by this notice.
- (4) Determine the appropriate § 102(e) date for each potential reference by following the guidelines below and examples set forth under Part V:
  - (a) The potential reference must be a U.S. patent, a U.S. application publication (35 U.S.C. § 122(b)) or a WIPO publication of an international application under PCT Article 21(2) in order to apply the reference under § 102(e).
  - (b) Determine if the potential reference resulted from, or claimed the benefit of, an international application. If the reference does, go to step (c) below.



The § 102(e) date of a reference that did not result from, nor claimed the benefit of, an international application is its earliest effective U.S. filing date, taking into consideration any proper priority or benefit claims to prior U.S. applications under §§ 119(e) or 120 if the prior application(s) properly supports the subject matter used to make the rejection. See MPEP 706.02(a), Eighth Edition (Aug. 2001) as revised by this notice.

- (c) If the potential reference resulted from, or claimed the benefit of, an international application, the following must be determined:
  - i. If the international application meets the following three conditions:
    - 1. an international filing date on or after November 29, 2000;
    - 2. designated the United States; and
    - 3. published under PCT Article 21(2) in English,
 the international filing date is a U.S. filing date for prior art purposes under § 102(e). If such an international application properly claims benefit to an earlier-filed U.S. or international application, or priority to an earlier-filed U.S. provisional application, apply the reference under § 102(e) as of the earlier filing date, assuming all the conditions of §§ 102(e), 119(e), 120, or 365(c) are met. Note, where the earlier application is an international application, the earlier international application must satisfy the same three conditions (i.e., filed on or after November 29, 2000, designated the U.S. and had been published in English under PCT Article 21(2)).
  - ii. If the international application was filed on or after November 29, 2000, but did **not** designate the United States or was **not** published in English under PCT Article 21(2), do **not** treat the international filing date as a U.S. filing date for use under 35 U.S.C. § 102(e) as a prior art date. In this situation, do **not** apply the reference as of its international filing date, its date of completion of the § 371(c)(1), (2) and (4) requirements, or any earlier filing date to which such an international application claims benefit or priority. The reference may be applied under § 102(a) or (b) as of its publication date, or § 102(e) as of any later U.S. filing date of an application that properly claimed the benefit of the international application (if applicable).
  - iii. If the international application has an international filing date prior to November 29, 2000, apply the reference under the provisions of §§ 102 and 374, prior to the AIPA amendments:
    - 1. For U.S. patents, apply the reference under § 102(e) as of the earlier of the date of completion of the requirements of § 371(c)(1), (2) and (4) or the filing date of the later-filed U.S. application that claimed the benefit of the international application.

2. For U.S. application publications and WIPO publications of international applications under PCT Article 21(2), never apply these references under § 102(e). These references may be applied as of their publication dates under § 102(a) or (b).
3. For U.S. application publications of applications that claim the benefit of an international application filed prior to November 29, 2000, apply the reference under § 102(e) as of the actual filing date of the later-filed U.S. application that claimed the benefit of the international application.
- iv. Examiners should be aware that although a publication of, or a U.S. Patent issued from, an international application may not have a § 102(e) date at all, or may have a § 102(e) date that is after the effective filing date of the application being examined (so it is not "prior art"), the corresponding WIPO publication of an international application will likely have an earlier § 102(a) or (b) date.
- (d) Foreign applications' filing dates that are claimed (via 35 U.S.C. §§ 119(a)-(d) or 365(a)) in applications, which have been published as U.S. or WIPO application publications or patented in the U.S., may **not** be used as § 102(e) dates for prior art purposes. This would include international filing dates claimed as foreign priority dates under 35 U.S.C. § 365(a).

(5) Determine whether 35 U.S.C. § 103(c) common assignee considerations apply.

If a § 102(e) reference is applied in an obviousness rejection under 35 U.S.C. § 103(a) (including provisional rejections) in an application filed on or after November 29, 1999<sup>4</sup>, the examiner should ascertain whether there is evidence that the claimed invention and the reference were owned by the same person, or subject to an obligation of assignment to the same person, at the time the claimed invention was made. A clear statement of entitlement to the prior art exclusion by applicant(s) or a registered practitioner would be sufficient evidence to establish the prior art exclusion. A double patenting rejection, however, based on the § 102(e) reference could be applied, if appropriate, even if the reference is disqualified from being used a rejection under § 103(a). See MPEP 706.02(I), Eighth Edition (Aug. 2001).

(6) Apply the reference(s) under §§ 102 or 103, based on the provision of § 102 that gives the best prior art date for the disclosure. If a reference is prior art under both §§ 102 (a) and (e), but not § 102(b), the reference should be applied under both provisions.

- (a) Examiners should provide a copy of the appropriate statutory language under which the rejection is made in the first Office action utilizing such a rejection. Only revised (October 2002, or more current) Form Paragraphs pertaining to § 102(e) should be used.

(7) Final rejection practice: If a second or subsequent action contains a new ground of rejection necessitated by the change to 35 U.S.C. § 102(e) that was not also necessitated by an amendment to the claims or as a result of certain information disclosure statements, that action cannot be made final. See MPEP 706.07(a), Eighth Edition (Aug. 2001).

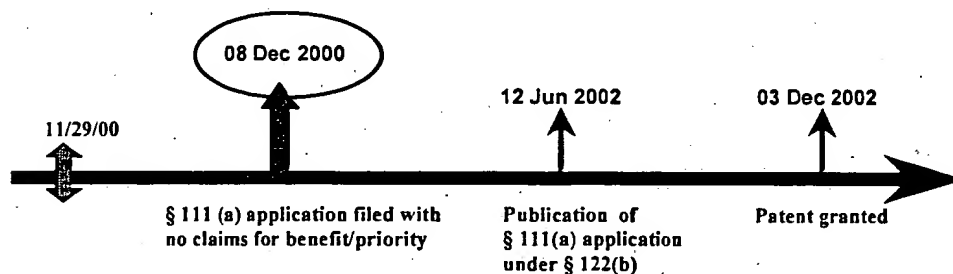
## V) Examples

In order to illustrate the prior art dates of U.S. and WIPO **publications** of patent applications and United States **patents** under § 102(e), nine examples are presented below. The examples only cover the most common factual situations that might be encountered when determining the § 102(e) date of a reference. Examples 1 and 2 involve only U.S. application publications and U.S. patents. Example 3 involves a priority claim to a foreign patent application. Examples 4-9 involve international applications. The **time lines** in the examples below show the history of the prior art **references** that could be applied against the claims of the application under examination, or the patent under reexamination.

The dates in the examples below are arbitrarily used and are presented for illustrative purposes only. Therefore, correlation of patent grant dates with Tuesdays or application publication dates with Thursdays may not be portrayed in the examples.

### Example 1: Reference Publication and Patent of § 111(a) Application with no Priority/Benefit Claims

For reference publications and patents of patent applications filed under 35 U.S.C. § 111(a) with no claim for the benefit of, or priority to, a prior application, the prior art dates under § 102(e) accorded to these references are the earliest effective United States filing date. Thus, a publication and patent of a § 111(a) application, which does not claim any benefit under either 35 U.S.C. §§ 119(e), 120 or 365(c), would be accorded the application's actual filing date as its prior art date under § 102(e).

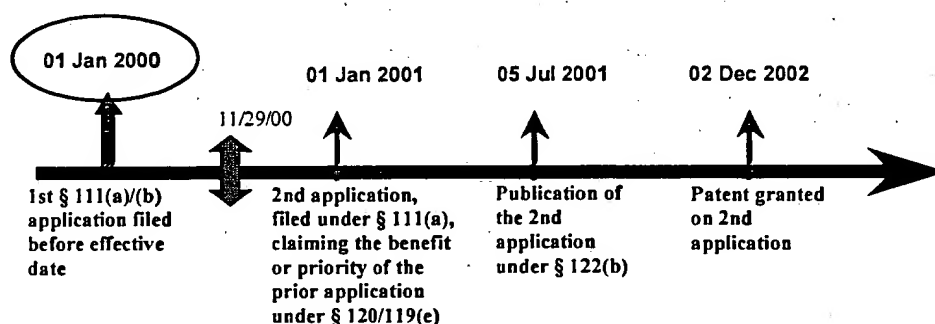


The § 102(e)(1) date for Publication is: 08 Dec 2000  
 The § 102(e)(2) date for the Patent is: 08 Dec 2000

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**Example 2:** Reference Publication and Patent of § 111(a) Application with Priority/Benefit Claim to a Prior U.S. Provisional or Nonprovisional Application

For reference publications and patents of patent applications filed under 35 U.S.C. § 111(a), the prior art dates under § 102(e) accorded to these references are the earliest effective United States filing dates. Thus, a publication and patent of a § 111(a) application, which claims priority under 35 U.S.C. § 119(e) to a prior U.S. provisional application or claims the benefit under 35 U.S.C. § 120 of a prior nonprovisional application, would be accorded the earlier filing date as its prior art date under § 102(e), assuming the earlier-filed application has proper support for the subject matter as required by §§ 119(e) or 120.

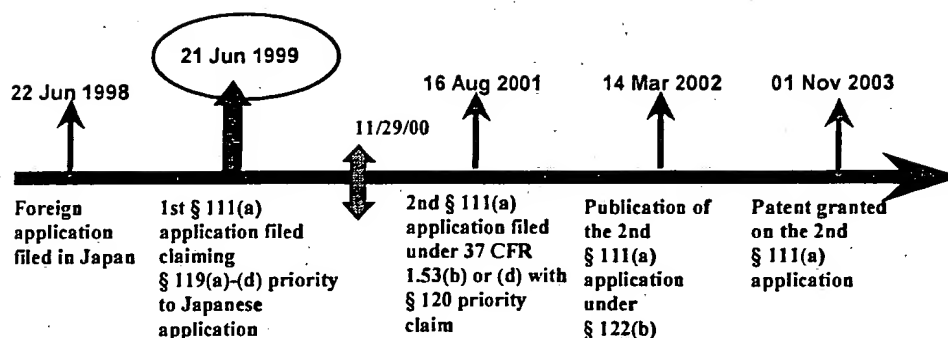


The § 102(e)(1) date for Publication is: 01 Jan 2000  
 The § 102(e)(2) date for the Patent is: 01 Jan 2000

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**Example 3:** Reference Publication and Patent of § 111(a) Application with § 119(a)-(d) Benefit Claim to a Prior Foreign Application

For reference publications and patents of patent applications filed under 35 U.S.C. § 111(a), the prior art dates under § 102(e) accorded to these references are the earliest effective United States filing dates. No benefit of the filing date of the foreign application is given under § 102(e) for prior art purposes (*In re Hilmer*, 149 USPQ 480 (CCPA 1966)). Thus, a publication and patent of a § 111(a) application, which claims benefit under 35 U.S.C. § 119(a)-(d) to a prior foreign-filed application, would be accorded its United States filing date as its prior art date under § 102(e).

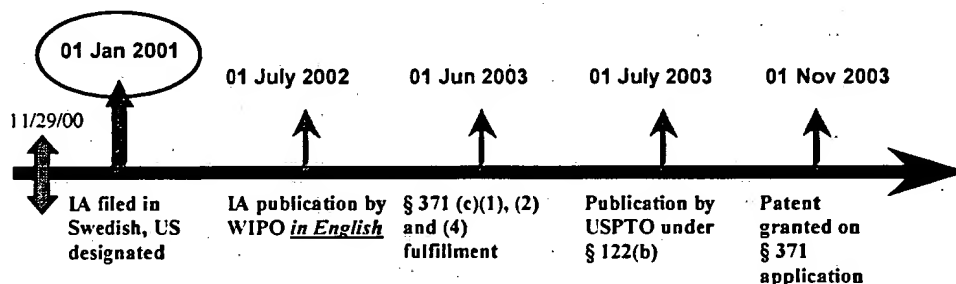


The § 102(e)(1) date for Publication is: 21 Jun 1999

The § 102(e)(2) date for the Patent is: 21 Jun 1999

**Example 4: References based on the National Stage (§ 371) of an International Application filed on or after November 29, 2000 and which was published in English under PCT Article 21(2).**

All references, whether the WIPO publication, the U.S. application publication or the U.S. patent, of an international application (IA) that was filed on or after November 29, 2000, designated the U.S., and was published in English under PCT Article 21(2) by WIPO, have the § 102(e) prior art date of the international filing date or earlier effective U.S. filing date. No benefit of the international filing date (nor any U.S. filing dates prior to the IA), however, is given for § 102(e) prior art purposes if the IA was published under PCT Article 21(2) in a language other than English.



The § 102(e)(1) date for the IA publication by WIPO is: 01 Jan 2001

The § 102(e)(1) date for Publication by USPTO is: 01 Jan 2001

The § 102(e)(2) date for the Patent is: 01 Jan 2001

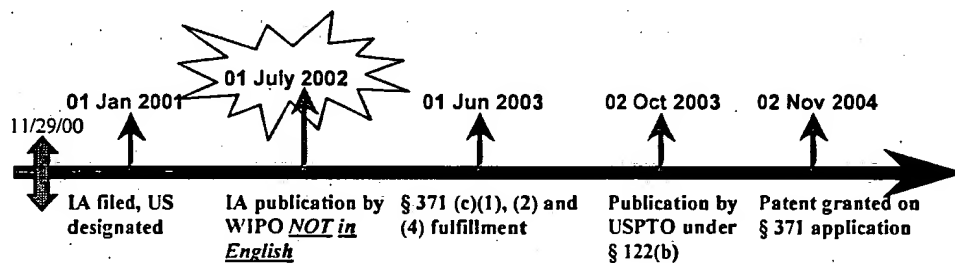
**Additional Priority/Benefit Claims:**

- ✓ If a later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of the IA in the example above, the § 102(e) date of the patent or publication of the later-filed U.S. application would be the international filing date, assuming the earlier-filed IA has proper support for the subject matter relied upon as required by § 120.

- ✓ If the IA properly claimed priority to an earlier-filed U.S. provisional (§ 111(b)) application or the benefit of an earlier-filed U.S. nonprovisional (§ 111(a)) application, the § 102(e) date for all the references would be the filing date of the earlier-filed U.S. application, assuming the earlier-filed application has proper support for the subject matter relied upon as required by §§ 119(e) or 120.

**Example 5: References based on the National Stage (§ 371) of an International Application filed on or after November 29, 2000 and which was not published in English under PCT Article 21(2).**

All references, whether the WIPO publication, the U.S. application publication or the U.S. patent, of an international application (IA) that was filed on or after November 29, 2000 but was **not** published in **English** under PCT Article 21(2) by WIPO, have no § 102(e) prior art date at all. According to § 102(e), no benefit of the international filing date (nor any U.S. filing dates prior to the IA) is given for § 102(e) prior art purposes if the IA was published under PCT Article 21(2) in a language other than English regardless of whether the international application entered the National Stage. Such references may be applied under § 102(a) or (b) as of their publication dates, but never under § 102(e).



The § 102(e)(1) date for the IA publication by WIPO is: None

The § 102(e)(1) date for Publication by USPTO is: None

The § 102(e)(2) date for the Patent is: None

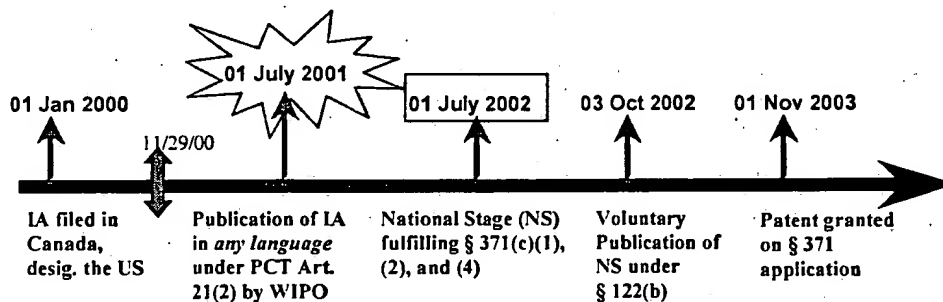
The IA publication by WIPO can be applied under § 102(a) or (b) as of its publication date (01 July 2002).

**Additional Priority/Benefit Claims:**

- ✓ If the IA properly claimed priority/benefit to any earlier-filed U.S. application (whether provisional or nonprovisional), there would still be no § 102(e) date for all the references.
- ✓ If a later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of the IA in the example above, the § 102(e) date of the patent or publication of the later-filed U.S. application would be the actual filing date of the later-filed U.S. application.

**Example 6: References based on the National Stage (§ 371) of an International Application filed prior to November 29, 2000 (language of the publication under PCT Article 21(2) is not relevant)**

The reference U.S. patent issued from an international application (IA) that was filed prior to November 29, 2000 has a § 102(e) prior art date of the date of fulfillment of the requirements of 35 U.S.C. § 371(c)(1), (2) and (4). This is the pre-AIPA § 102(e). The application publications, both the WIPO publication and the U.S. publication, published from an international application that was filed prior to November 29, 2000, do not have any § 102(e) prior art date. According to the effective date provisions as amended by H.R. 2215, the amendments to §§ 102(e) and 374 are not applicable to international applications having international filing dates prior to November 29, 2000. The application publications can be applied under § 102(a) or (b) as of their publication dates.



The § 102(e)(1) date for the IA publication by WIPO is: None

The § 102(e)(1) date for Publication by USPTO is: None

The § 102(e) date for the Patent is: 01 July 2002

The IA publication by WIPO can be applied under § 102(a) or (b) as of its publication date (01 July 2001).

**Additional Priority/Benefit Claims:**

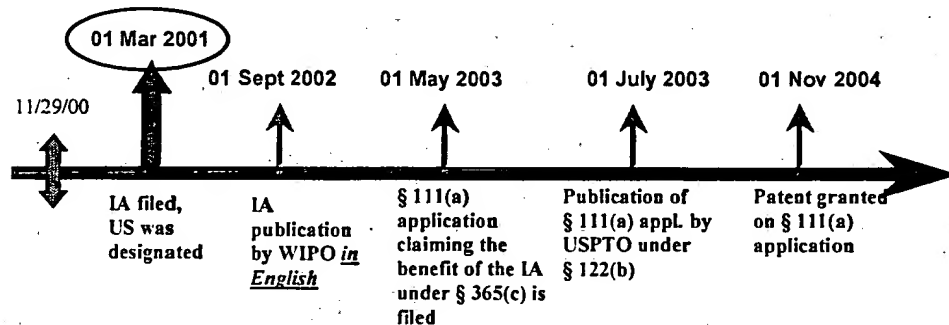
- ✓ If the IA properly claimed priority/benefit to any earlier-filed U.S. application (whether provisional or nonprovisional), there would still be no § 102(e)(1) date for the U.S. and WIPO application publications, and the § 102(e) date for the patent will still be 01 July 2002 (the date of fulfillment of the requirements under § 371(c)(1), (2) and (4)).
- ✓ If a later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of the IA in the example above, the § 102(e)(1) date of the application publication of later-filed U.S. application would be the actual filing date of the later-filed U.S. application, and § 102(e) date of the patent of the later-filed U.S. application would be 01 July 2002 (the date that the earlier-filed IA fulfilled the requirements of § 371(c)(1), (2) and (4)).
- ✓ If the patent was based on a later-filed U.S. application that claimed the benefit of the international application and the later filed U.S. application's filing date is

before the date the requirements of 35 U.S.C. 371(c)(1)(2) and (4) were fulfilled (if fulfilled at all), the 102(e) date of the patent would be the filing date of the later-filed U.S. application that claimed the benefit of the international application.

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**Example 7: References based on a § 111(a) Application which is a Continuation of an International Application, which was filed on or after November 29, 2000, designated the U.S. and was published in English under PCT Article 21(2)**

All references, whether the WIPO publication, the U.S. application publication or the U.S. patent of, or claiming the benefit of, an international application (IA) that was filed on or after November 29, 2000, designated the U.S. and was published in English under PCT Article 21(2) by WIPO, have the § 102(e) prior art date of the international filing date or earlier effective U.S. filing date. No benefit of the international filing date (nor any U.S. filing dates prior to the IA), however, is given for § 102(e) purposes if the IA was published under PCT Article 21(2) by WIPO in a language other than English.



The § 102(e)(1) date for the IA publication by WIPO is: 01 Mar 2001

The § 102(e)(1) date for Publication by USPTO is: 01 Mar 2001

The § 102(e)(2) date for the Patent is: 01 Mar 2001

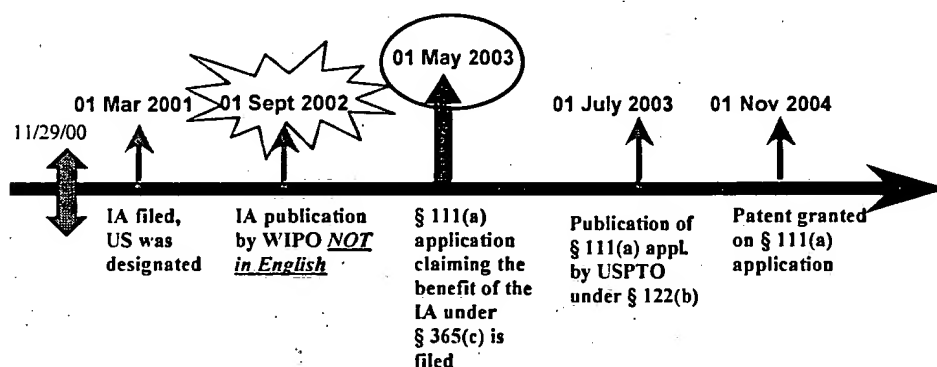
#### Additional Priority/Benefit Claims:

- ✓ If the IA properly claimed priority to an earlier-filed U.S. provisional (§ 111(b)) application or the benefit of an earlier-filed U.S. nonprovisional (§ 111(a)) application, the § 102(e) date for all the references would be the filing date of the earlier-filed U.S. application, assuming the earlier-filed application has proper support for the subject matter relied upon as required by §§ 119(e) or 120.
  - ✓ If a second, later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of the § 111(a) application in the example above, the § 102(e) date of the patent or publication of the second, later-filed U.S. application would still be the international filing date of the IA, assuming the earlier-filed IA has proper support for the subject matter relied upon as required by § 120 and 365(c).
-



**Example 8:** References based on a § 111(a) Application which is a **Continuation of an International Application**, which was **filed on or after November 29, 2000** and was **not published in English** under PCT Article 21(2)

Both the U.S. publication and the U.S. patent of the § 111(a) continuation of an international application (IA) that was filed on or after November 29, 2000 but was **not** published in English under PCT Article 21(2) by WIPO have the § 102(e) prior art date of its actual U.S. filing date under § 111(a). No benefit of the international filing date (nor any U.S. filing dates prior to the IA) is given for § 102(e) purposes if the IA was published under PCT Article 21(2) in a language other than English. The IA publication under PCT Article 21(2) does not have a prior art date under § 102(e)(1) because the IA was not published in English under PCT Article 21(2). The IA publication under PCT Article 21(2) can be applied under § 102(a) or (b) as of its publication date.



The § 102(e)(1) date for the IA publication by WIPO is: None  
 The § 102(e)(1) date for Publication by USPTO is: 01 May 2003  
 The § 102(e)(2) date for the Patent is: 01 May 2003

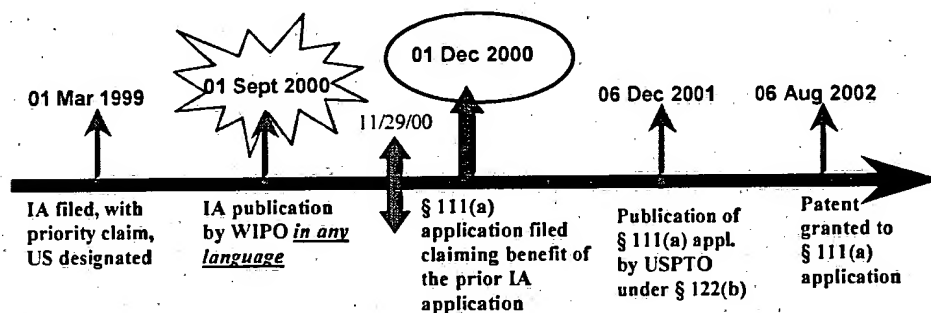
The IA publication by WIPO can be applied under § 102(a) or (b) as of its publication date (01 Sept 2002).

#### Additional Priority/Benefit Claims:

- ✓ If the IA properly claimed priority/benefit to any earlier-filed U.S. application (whether provisional or nonprovisional), there would still be no § 102(e)(1) date for the IA publication by WIPO, and the U.S. application publication and patent would still have a § 102(e) date of the actual filing date of the later-filed § 111(a) application in the example above (01 May 2003).
- ✓ If a second, later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of the § 111(a) application in the example above, the § 102(e) date of the patent or publication of the second, later-filed U.S. application would still be the actual filing date of the § 111(a) application in the example above (01 May 2003).

**Example 9:** References based on a § 111(a) Application which is a **Continuation** (filed prior to any entry of the National Stage) of an **International Application**, which was **filed prior to November 29, 2000** (language of the publication under PCT Article 21(2) is not relevant)

Both the U.S. publication and the U.S. patent of the § 111(a) continuation (filed prior to any entry of the National Stage) of an international application (IA) that was filed prior to November 29, 2000 have the § 102(e) prior art date of its actual U.S. filing date under § 111(a). No benefit of the international filing date (nor any U.S. filing dates prior to the IA) is given for § 102(e) prior art purposes if the IA was filed prior to November 29, 2000. The IA publication under PCT Article 21(2) does not have a prior art date under § 102(e)(1) because the IA was filed prior to November 29, 2000. The IA publication under PCT Article 21(2) can be applied under § 102(a) or (b) as of its publication date.



The § 102(e)(1) date for the IA publication by WIPO is: None

The § 102(e)(1) date for Publication by USPTO is: 01 Dec 2000

The § 102(e) date for the Patent is: 01 Dec 2000

The IA publication by WIPO can be applied under § 102(a) or (b) as of its publication date (01 Sept 2000).

#### Additional Priority/Benefit Claims:

- ✓ If the IA properly claimed priority/benefit to any earlier-filed U.S. application (whether provisional or nonprovisional), there would still be no § 102(e)(1) date for the IA publication by WIPO, and the U.S. application publication and patent would still have a § 102(e) date of the actual filing date of later-filed § 111(a) application in the example above (01 Dec 2000).
- ✓ If a second, later-filed U.S. nonprovisional (§ 111(a)) application claimed the benefit of § 111(a) application in the example above, the § 102(e) date of the patent or publication of the second, later-filed U.S. application would still be the actual filing date of the § 111(a) application in the example above (01 Dec 2000).

FOR FURTHER INFORMATION CONTACT: Jeanne Clark or Robert Clarke, Legal Advisors in the Office of Patent Legal Administration, by telephone at (703) 305-1622, by fax at (703) 305-1013, or by e-mail addressed to Jeanne.Clark@USPTO.gov or Robert.Clarke@USPTO.gov.

12/11/02  
[date]

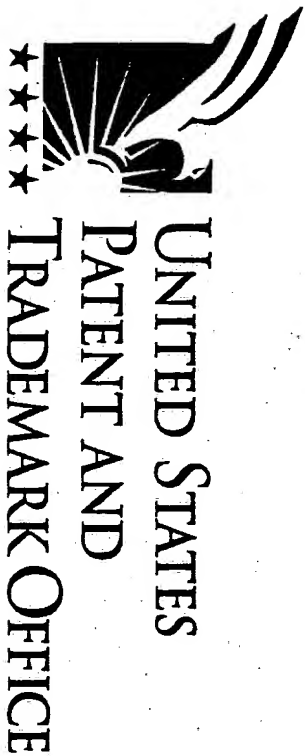
/s/  
Stephen G. Kunin  
Deputy Commissioner  
for Patent Examination Policy

<sup>1</sup> An original version of this Notice, signed on November 4, 2002, was posted on the Office's web site, and disseminated in paper copy form as a Pre-OG Notice as it was expected that the Notice would soon publish in the Official Gazette. In view of comments received, however, this revised version of the Notice additionally includes a clarification of Office policy in "(7) Final Rejection Practice" in Section IV of the Discussion portion, some further applicability notes in Examples 5 and 6 in Section V of the Discussion portion, and some minor edits. In addition, Item B of the Significant Provisions portion, the third paragraph of Section II of the Discussion portion and part (c)(ii) of "(4) Determine the appropriate § 102(e) date for each potential reference by following the guidelines below and examples set forth under Part V" in Section IV of the Discussion portion have been revised to note that the filing dates of international applications that designate the U.S. (which are filing dates in the U.S.) are only treated as prior art dates under 35 U.S.C. § 102(e) under certain circumstances. This revised Notice signed December 11, 2002, therefore, supercedes the original Notice.

<sup>2</sup> If the reference is a patent based on an International Application filed prior to November 29, 2000; § 102(e) prior to the AIPA is used to determine its § 102(e) prior art date.

<sup>3</sup> The amendments to § 102(e) were set forth in section 4505 of the AIPA, as amended by H.R. 2215. The amendments to § 374 were set forth in section § 4507 of the AIPA, as amended by H.R. 2215.

<sup>4</sup> The revision to 35 U.S.C. § 103(c) was made in § 4807 of the AIPA and is applicable only to applications filed on or after November 29, 1999.



**35 U.S.C. §§ 102(e) and 374**  
**as amended by**

**H.R. 2215 (Technical Amendment Act)**

Date enacted: 11/02/02

Date effective: 11/29/00

Prepared by:

Office of Patent Legal Administration (OPLA)

Robert J. Spar, Director

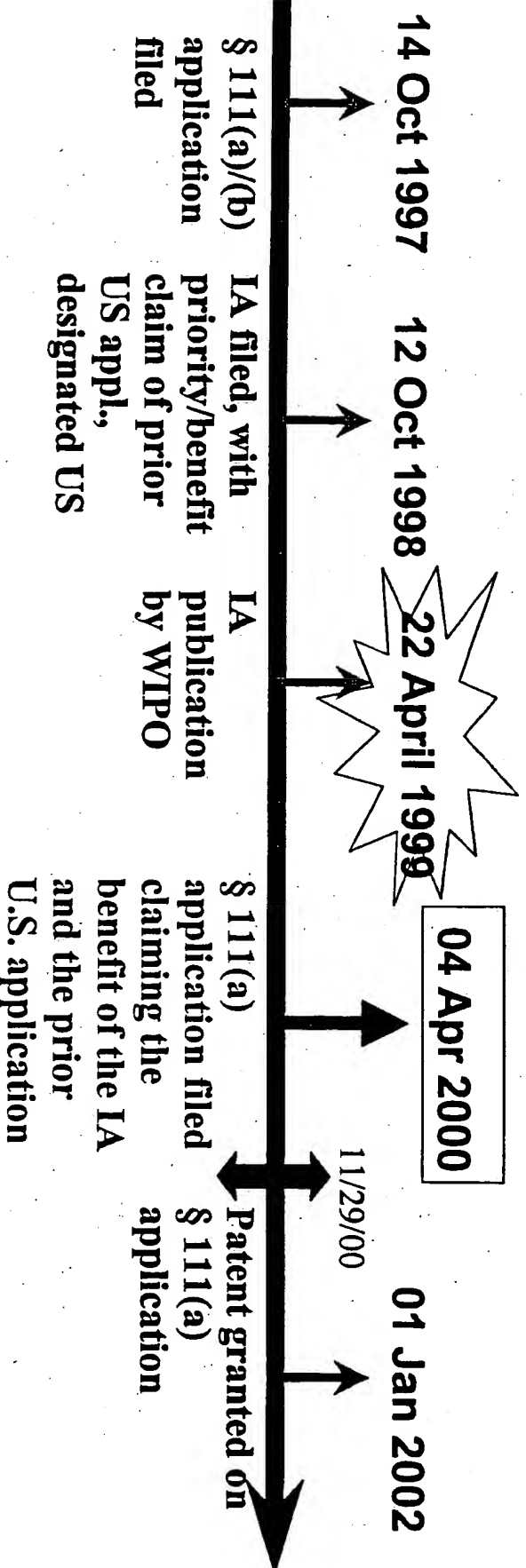
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Appendix 4

**EX. P5B: PATENT DERIVED FROM THE CONTINUATION OF AN IA  
WHICH CLAIMS PRIORITY / BENEFIT OF A U.S. APPLICATION**

**Sample Timeline – Guideline 5**



**§ 102(e)(2) date of the patent: 04 Apr 2000**

**Notes:**

- ✓ Patent cannot be applied as of the earlier filing date of the IA or the earlier filing date of the § 111(a)/(b) application.
- ✓ The best prior art date for the disclosure is the § 102(a) or (b) date (22 April 1999) of the WIPO publication of IA. The publication date can be determined by doing a family data search on the prior applications.

November 14, 2002

§ 102(e) after HR 2215